NOVEL THERAPEUTIC FOR INFLAMMATORY DISORDERS

SUMMARY

The National Cancer Institute's Frederick National Lab's Molecular Targets Laboratory is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize a novel inhibitor of the NF-kappa B signal transduction pathway, which leads to many inflammatory disorders.

REFERENCE NUMBER

E-295-2008

PRODUCT TYPE

- Therapeutics

COLLABORATION OPPORTUNITY

This invention is available for licensing and co-development.

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DESCRIPTION OF TECHNOLOGY

Many tumors and blood cell cancers show over-activation of the NF-kappa B signal transduction pathway. This over-activation is associated with cancer forming in the colon, liver and other epithelial sites. In addition, there is evidence that over-activation leads to tumor formation and metastasis. However, this pathway is key for normal immunity, so any inhibition of NF-kappa B over-activation must avoid diminishing the body's ability to fight infection.

This invention describes a compound that inhibits NF-kappa B activation without affecting other transcription factors such as AP-1 and SRE binding proteins. It appears to function by blocking IKK beta and is effective at low micromolar concentrations without affecting cell proliferation or cell survival or compromising immunity. In addition, because NF-kappa B over-activation contributes to a variety of inflammatory disorders including colitis, diabetes, prostatitis, and pancreatitis this compound has therapeutic applications beyond cancer.

Further R&D is needed to isolate and purify adequate supplies of the inhibitor, and to conduct in vivo proof-of principle testing.

COMPETITIVE ADVANTAGES

- Highly specific inhibitor that targets NF-kappa B without affecting cell growth or compromising immunity
- Therapeutic for the prevention or treatment of cancers or inflammatory diseases associated with the over-activation of NF-kappa B
- Ability to develop reagents for the diagnosis of conditions related to overexpression of NF-kappa B.

INVENTOR(S)

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DEVELOPMENT STAGE

- Discovery (Lead Identification)

PATENT STATUS

- **U.S. Issued:** US 8,729,053 (14 May 2014)

THERAPEUTIC AREA

- Cancer/Neoplasm